

## Financial Developments

### Net Income and Profitability

Net income (including unusual items)<sup>1</sup> for the Financial Reporting System (FRS) companies increased 47 percent from the previous year to \$119 billion dollars in 2005 (**Table 1**), the highest amount (in constant

**Table 1. Consolidated Income Statement for FRS Companies and Census' All Manufacturing Companies, 2004-2005** (Billion Dollars)

Income Statement Items	FRS Companies			All Manufacturing Companies		
	2004	2005	Percent Change 2004-2005	2004	2005	Percent Change 2004-2005
Operating Revenues	1060.5	1334.2	25.8	4,934.1	5,400.8	9.5
Operating Expenses	938.0	1165.1	24.2	4,613.6	5,043.2	9.3
Operating Income (Revenues minus Expenses)	122.5	169.1	38.0	320.4	357.7	11.6
Interest Expense	-11.0	-10.7	-3.4	-82.0	-88.0	7.3
Other Revenue (Expense)	17.9	31.9	77.5	209.1	250.3	19.7
Income Tax Expense	-48.4	-71.1	47.0	-99.3	-121.2	22.0
Net Income	81.1	119.2	47.0	348.2	398.8	14.6
Net Income Excluding Unusual Items	82.8	114.5	38.2	NA	NA	

Note: Sum of components may not equal total due to independent rounding. Percent changes were calculated from unrounded data.

NA= not available.

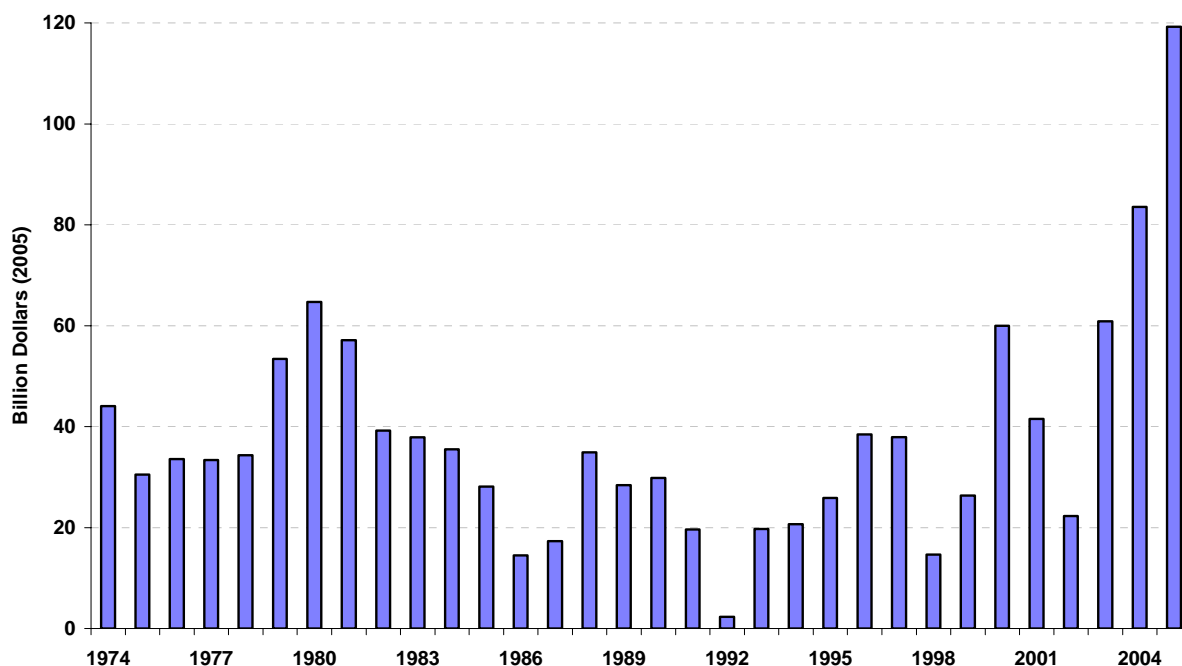
Sources: **FRS Companies:** Energy Information Administration Form EIA-28 (Financial Reporting System); **All Manufacturing Companies:** U.S. Census Bureau, Quarterly Financial Report.

dollars) in the history of the FRS survey (**Figure 1**).<sup>2</sup> Operating revenues and operating expenses also reached the highest levels ever recorded by the survey. Operating revenues jumped 26 percent on continuing increases in crude oil, natural gas, and petroleum product prices (see the overview of market trends section). Operating expenses rose by 24 percent as higher prices stimulated activity in exploration and development, which pushed costs up as demand for drilling rigs, materials, and personnel increased. Refinery operating expenses also increased, due in part to higher energy costs. The larger increase in revenues resulted in a 38-percent jump in operating income, to \$169 billion in 2005. Excluding unusual items, net income rose 38 percent to \$114 billion.

<sup>1</sup> Unusual items include accounting changes, asset dispositions and write-downs, tax adjustments, etc.

<sup>2</sup> The composition of the FRS group of companies changes over time, but the changes are usually incremental. A company is added to the survey when, through growth or acquisition, it meets the criteria classifying it as a major energy company. In 2005, the FRS group consisted of 29 companies. Typically no more than two companies are added to the survey in any given year. The new companies are usually relatively small compared to the existing FRS group, so the effect on the aggregate totals is marginal. The year 1998 was an exception. Because of a change in the FRS criteria, 11 companies were added to the FRS group. Companies rarely exit unless through merger, in which case the assets of the exiting company are absorbed into the surviving company. Thus, despite occasional year-to-year changes in the FRS group composition, comparisons are still meaningful and informative.

Figure 1. FRS Net Income, 1974-2005



Note: The FRS group of companies has changed incrementally over the years. See footnote 2.

Source: Energy Information Administration Form EIA-28, (Financial Reporting System).

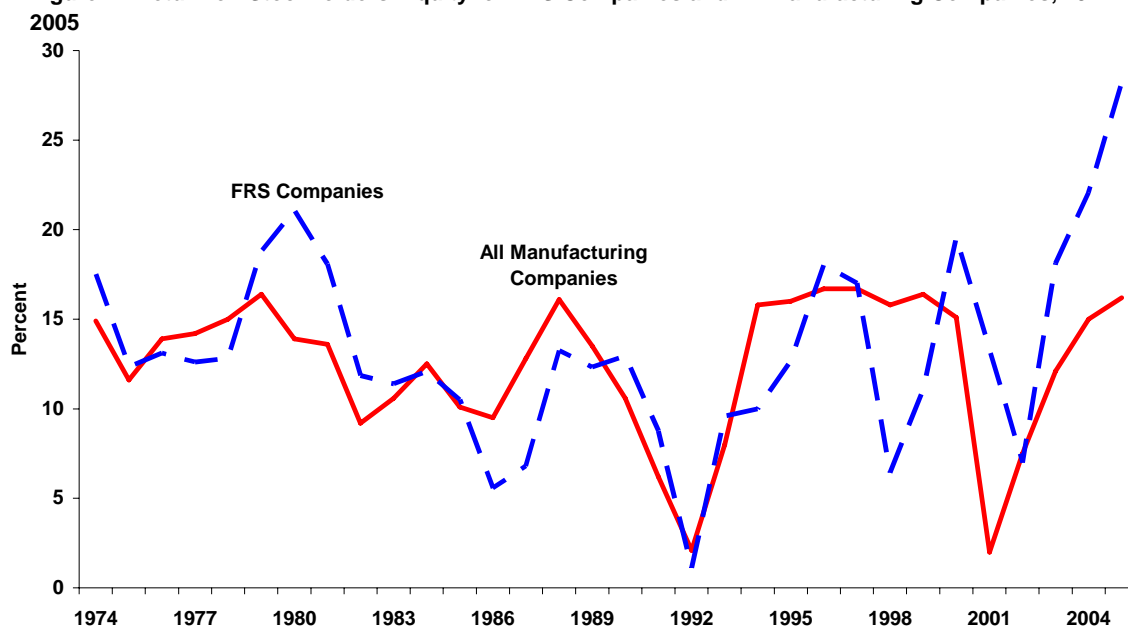
Profitability—the measure of a company’s or an industry’s net income relative to the equity or capital provided by its investors—rose to 28.2 percent, considerably higher than the previous peak of 22.1 percent in 2004 (**Figure 2**). Using the Census Bureau’s All Manufacturing Companies as a benchmark, the FRS companies averaged a substantially higher return on stockholders’ equity for 5 of the past 6 years (**Figure 3**), a trend not seen since the high-price period of 1979 to 1981.

Among the FRS companies’ lines of business and business segments,<sup>3</sup> oil and natural gas production continued to be the most profitable, contributing \$89 billion in net income (**Table 2**). Refining/marketing provided an additional \$29 billion in earnings. Net income for the nonenergy line of business in 2005 changed little from 2004, but remained well above the level of the previous 3 years. Higher operating incomes in chemical business segments were the primary reason for the continued strong earnings in nonenergy.

The \$89 billion in net income for the oil and natural gas production segment in 2005 was 52 percent higher than that for the previous year, which had been the highest in the history of the FRS up to that point. The contribution of natural gas production to upstream revenues has become increasingly important as the natural gas share of FRS production has increased and natural gas prices reached record high levels.

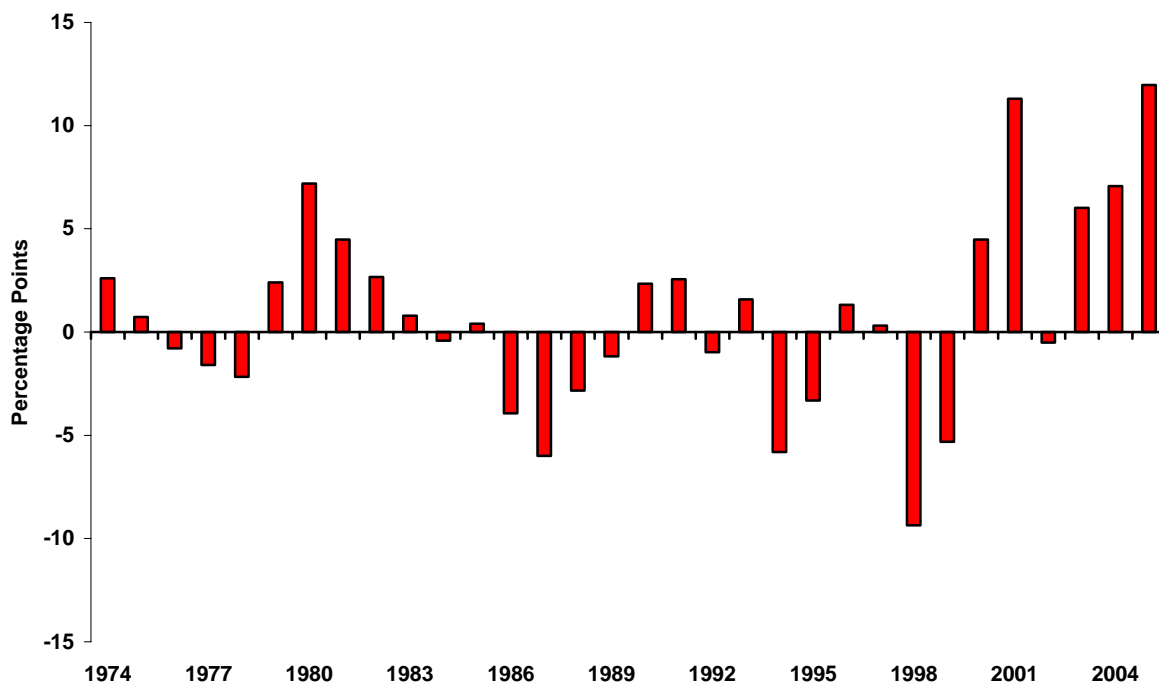
<sup>3</sup> The FRS collects financial and operating information for the combined corporate entity as well as by lines of business within the company. The lines of business consist of petroleum, downstream natural gas (including natural gas liquids processing and natural gas pipelines), electric power, nonenergy, and other energy (including coal, nuclear, renewable fuels, and nonconventional fuels). The petroleum line of business is further segmented into production, refining/marketing, crude and petroleum product pipelines (for domestic petroleum), and international marine transport (for foreign petroleum).

**Figure 2. Return on Stockholders' Equity for FRS Companies and All Manufacturing Companies, 1974-**



Sources: **FRS Companies:** Energy Information Administration, Form EIA-28 (Financial Reporting System). **All Manufacturing Companies:** U.S. Census Bureau Quarterly Financial Report, All Manufacturing Companies.

**Figure 3. Difference Between FRS and All Manufacturing Companies Return on Stockholders' Equity, 1974-2005**



Sources: **FRS Companies:** Energy Information Administration, Form EIA-28 (Financial Reporting System). **All Manufacturing Companies:** U.S. Census Bureau Quarterly Financial Report, All Manufacturing Companies.

**Table 2. Contributions to Net Income by Line of Business for FRS Companies,  
2004-2005**  
(Million Dollars)

Line of Business	Net Income			Net Income Excluding Unusual Items		
	2004	2005	Percent Change 2004-2005	2004	2005	Percent Change 2004-2005
Petroleum						
U.S. Petroleum						
Oil and Gas Production	30,146	40,496	34.3	30,050	40,479	34.7
Refining/Marketing	15,197	20,963	37.9	15,752	21,595	37.1
Pipelines	414	480	15.9	417	488	17.0
Total U.S. Petroleum	45,757	61,939	35.4	46,219	62,562	35.4
Foreign Petroleum						
Oil and Gas Production	28,592	48,728	70.4	28,116	44,634	58.7
Refining/Marketing <sup>a</sup>	6,953	7,804	12.2	6,941	7,688	10.8
Total Foreign Petroleum	35,548	56,532	59.0	35,060	52,321	49.2
Total Petroleum	81,305	118,471	45.7	81,279	114,883	41.3
Downstream Natural Gas	3,273	2,209	-32.5	3,651	1,951	-46.5
Electric Power	639	355	-44.4	1,061	716	-32.5
Other Energy <sup>b</sup>	1,078	1,036	-3.9	1,026	1,089	6.2
Nonenergy	4,192	4,214	0.5	4,783	4,110	-14.1
Total Allocated	90,487	126,285	39.6	91,800	122,749	33.7
Nontraceable <sup>c</sup>	-9,400	-7,067	--	-8,968	-8,298	--
Consolidated Net Income <sup>d</sup>	81,087	119,218	47.0	82,832	114,451	38.2

<sup>a</sup>International Marine is included in Refining/Marketing.

<sup>b</sup>The Other Energy line of business includes coal, nuclear, and non-conventional energy.

<sup>c</sup>Revenues and expenses that cannot be directly attributed to a line of business.

<sup>d</sup>The total amount of unusual items was -\$1745 million and \$4767 million in 2004 and 2005, respectively.

-- = Not meaningful.

NA = Not available.

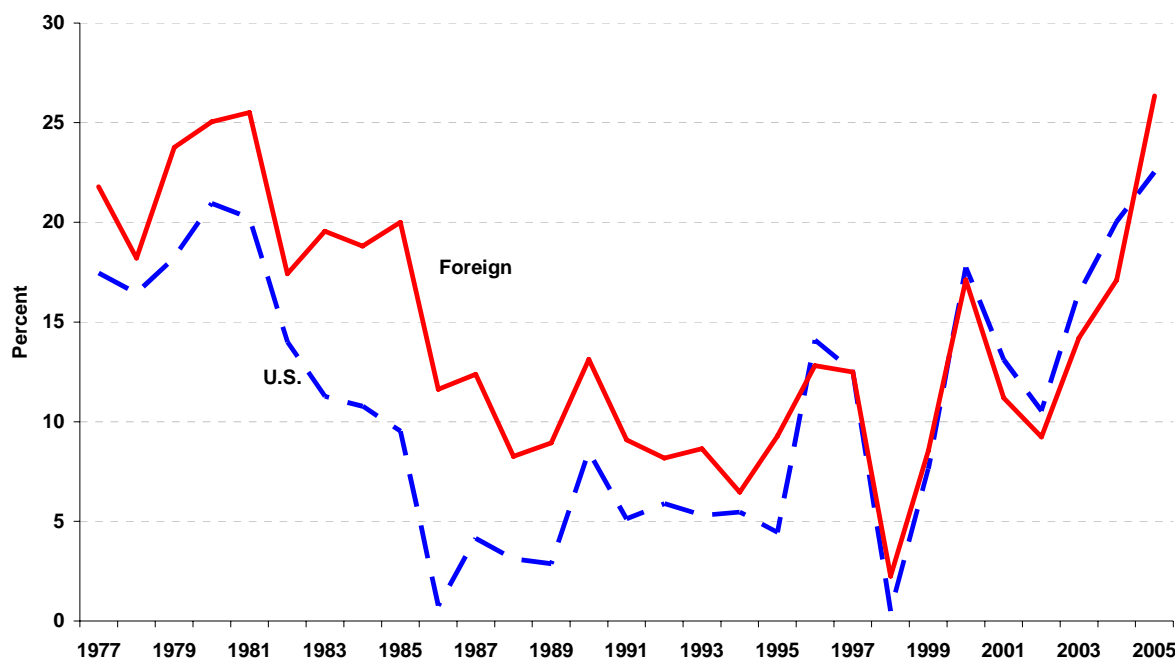
Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

Return on net investment in place (ROI)<sup>4</sup> for the oil and natural gas production segment increased to 25.0 percent, the highest in the history of the FRS. For the first time since 1999, the foreign oil and natural gas production segment of the FRS companies provided higher net income and higher ROI than the domestic segment (**Figure 4**).

Net income for the FRS companies' refining/marketing segment increased 30 percent in 2005 (**Table 2**). Refining/marketing has become a significant contributor to net income as higher demand for petroleum products has pushed prices up by more than the increased costs of crude oil. The domestic

<sup>4</sup> Because stockholders' equity is a corporate concept, the lines of business within the company use ROI as a measure of profitability. ROI is defined as net income divided by net investment in place for that segment. Net investment in place consists of the value of property, plant, and equipment net of depreciation plus investments and advances to unconsolidated affiliates.

**Figure 4. Return on Net Investment in Place for U.S. and Foreign Oil and Gas Production, 1977-2005**



Source: Energy Information Administration Form EIA-28 (Financial Reporting System).

refining/marketing gross margin<sup>5</sup> increased \$1.58 per barrel to \$9.87 per barrel (\$0.24 per gallon) in 2005, the highest (in constant 2005 dollars) since 1990 (**Figure 5**). Per-barrel operating costs also increased, but by much less, \$0.70 per barrel. As a result, the net refined product margin<sup>6</sup> rose to \$3.51 per barrel (\$0.08 per gallon) in 2005. This was the highest in the history of the FRS, \$0.52 per barrel higher than the previous peak in 2001. Both domestic and foreign ROI exceeded 20 percent in 2005 (**Figure 6**), yielding an overall refining/marketing ROI of 22.7 percent, which was also the highest in the history of the FRS survey.

## Sources and Uses of Cash

Major sources of cash include cash flow from operations, sales of assets, and proceeds from issuing debt or equity. Primary uses of cash include capital expenditures, paying dividends, purchasing company stock, and paying off debt.

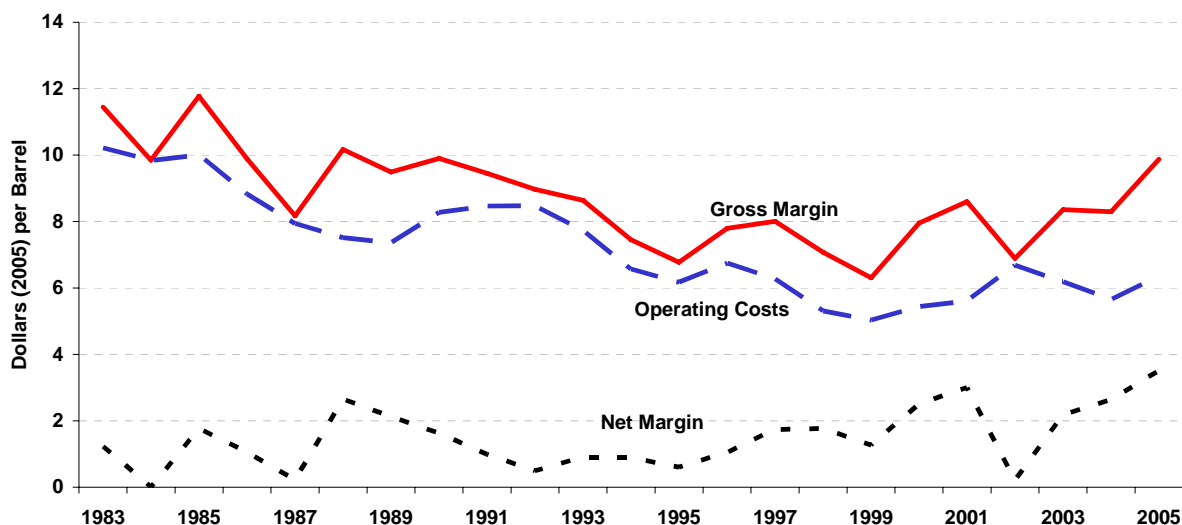
Cash flow from operations<sup>7</sup> for FRS companies increased 25 percent from the previous year to \$170 billion in 2005 (**Table 3**). This was two and a half times larger than the average annual cash flow (in

<sup>5</sup> The gross margin is refined product revenues less raw material cost and product purchases divided by refined product sales volume.

<sup>6</sup> The net refined product margin is the gross margin minus the costs of producing and selling the products.

<sup>7</sup> Cash flow from operations consists of net income plus expenses that do not require an outlay of cash minus earnings that do not provide a receipt of cash. For energy companies, the largest non-cash item generally is depreciation, depletion, and amortization (DD&A), which is an allowance for the decline in the value of property, plant, and equipment (PP&E), based on accounting principles, recorded as a charge against income. See Table B-11.

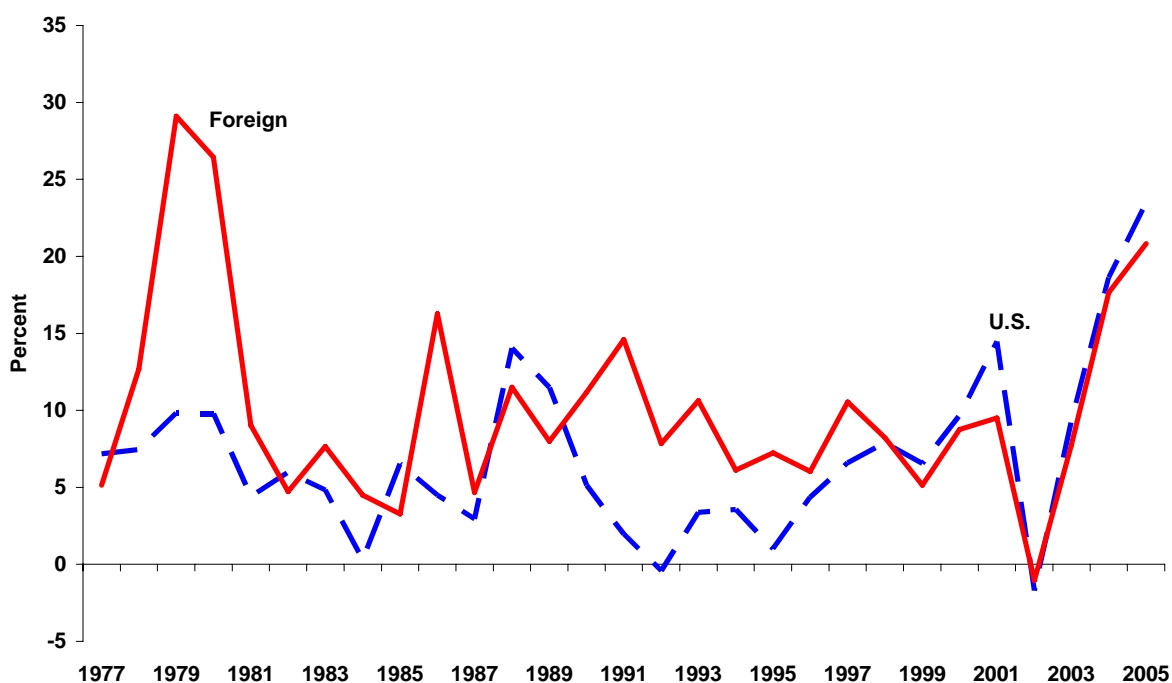
**Figure 5. U.S. Refined Product Margins and Costs per Barrel of Petroleum Product Sold for FRS Companies, 1983-2005**



Note: The gross margin is refined product revenues less raw material cost and product purchases divided by refined product sales volume.

Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

**Figure 6. Return on Net Investment in Place for U.S. and Foreign Refining and Marketing, 1977-2005**



Source: Energy Information Administration Form EIA-28 (Financial Reporting System).

**Table 3. Sources and Uses of Cash for FRS Companies, 2004-2005**

(Billion Dollars)

Sources and Uses of Cash	2004	2005	Absolute Change 2004-2005	Percent Change 2004-2005
Main Sources of Cash				
Cash Flow from Operations	135.8	169.9	34.0	25.1
Proceeds from Long-Term Debt	18.5	29.6	11.1	59.9
Proceeds from Disposals of Assets	19.7	35.9	16.2	82.2
Proceeds from Equity Security Offerings	8.1	10.5	2.3	28.8
Main Uses of Cash				
Additions to Investment in Place	86.5	132.9	46.4	53.6
Reductions in Long-Term Debt	18.4	33.3	14.9	80.8
Dividends to Shareholders	36.5	39.7	3.2	8.7
Purchase of Treasury Stock	14.0	31.8	17.8	127.0
Other Investment and Financing Activities, Net	-5.5	6.3	11.8	-214.7
Net Change in Cash and Cash Equivalents	21.2	14.4	-6.8	-32.0

Note: Sources minus uses plus other investment and financing activities (net) may not equal net change in cash and cash equivalents due to independent rounding.

Percent changes were calculated from unrounded data.

Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

constant 2005 dollars) from 1986 to 1999. Oil and natural gas production contributed 76 percent of the cash flow from operations (on a pre-tax basis) (**Table 4**).

In addition to funds from operations, FRS companies raised cash through disposals of assets, increasing the amount of cash from this source by 82 percent over 2004 to \$36 billion in 2005. Two FRS companies ceased operations in 2005 as other FRS companies acquired them (see the Capital Expenditures section); this contributed to the large increase in disposals of assets. Some companies took advantage of the high-price environment to sell off non-core assets.

Proceeds from equity security offerings increased by a relatively small \$2 billion, to \$10 billion in 2005. The large increase in cash flow reduced the need to raise cash through equity offerings.

The largest use of cash was for capital expenditures (measured as Additions to Investment in Place), which increased by \$46 billion from the previous year to \$133 billion in 2005. The Capital Expenditures section discusses these expenditures in greater detail.

Dividends to shareholders were the second largest use of cash, increasing 9 percent, to \$40 billion. The largest increase on a percentage basis in uses of cash was to buyback company stock. Many companies utilized stock buyback programs as a means to distribute part of the large increase in cash flow back to shareholders. The amount of cash used by FRS companies to repurchase their own stock more than doubled to \$32 billion in 2005.

The large increase in cash flow also reduced the need for long-term debt financing. FRS companies increased the amount of cash used to reduce long-term debt by 81 percent in 2005 to \$33 billion. Proceeds from issuing long-term debt also increased, but by a smaller amount, a 60-percent increase from 2004 to

**Table 4. Line-of-Business Contributions to Pretax Cash Flow, Income Taxes, and Cash Flow for FRS Companies, 2004-2005**  
(Billion Dollars)

Contribution to Pretax Cash Flow <sup>a</sup>	2004	2005	Absolute Change 2004-2005	Percent Change 2004-2005
Petroleum				
Oil and Gas Production	124.3	168.2	43.8	35.2
Refining, Marketing, and Transport	37.3	46.7	9.4	25.3
Downstream Natural Gas	5.6	2.6	-3.1	-54.4
Electric Power	2.2	1.5	-0.7	-30.0
Other Energy <sup>b</sup>	1.2	1.0	-0.2	-15.9
Chemicals	5.1	6.7	1.6	30.7
Other Nonenergy	0.6	-0.8	-1.4	--
Nontraceable	-4.7	-5.9	-1.1	--
Total Contribution to Pretax Cash Flow <sup>a</sup>	171.7	220.0	48.3	28.2
Current Income Taxes	-44.8	-66.9	--	49.5
Other (Net)	8.9	16.8	7.8	87.7
Cash Flow from Operations	135.8	169.9	34.0	25.1

<sup>a</sup>Defined as the sum of operating income, depreciation, depletion, and amortization, and dry hole expense.

<sup>b</sup>The Other Energy line of business includes coal, nuclear, and non-conventional energy.

-- = Not meaningful.

Note: Sum of components may not equal total due to independent rounding. Percent changes were calculated from unrounded data.

Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

\$30 billion in 2005. Overall, the ratio of long-term debt to stockholders' equity for FRS companies fell 8 percentage points in 2005 to 37.3 percent (**Table B3**), the lowest since 1983.

The overall uses of cash did not keep up with increases in sources of cash, resulting in an increase in cash balances and cash equivalents of \$14 billion in 2005. Although this was lower than the 2004 increase, it was the second-highest annual addition to cash balances in the 20 years that the FRS has been collecting cash flow information.

## Capital Expenditures

Companies expend funds to acquire assets such as property, buildings, and equipment that will remain in use for a number of years. Capital expenditures represent the value of assets acquired in the current time period net of depreciation, and also include investments and advancements to unconsolidated affiliate companies. Capital expenditures are also referred to as Additions to Investment in Place.

The FRS companies' capital expenditures increased 54 percent to \$133 billion in 2005 (**Table 5**). Capital expenditures for oil and natural gas production (domestic and foreign combined) made up 72 percent of the total, while the petroleum line of business accounted for 89 percent of the total.

Along with capital expenditures, FRS companies report expenditures for exploration, unproved property, development, proved property, and production (E&P) for the oil and natural gas production segment. Current expenditures as well as capital expenditures are included in the data, but capital expenditures are



**Table 5. Additions to Investment in Place by Line of Business for FRS Companies,  
2004-2005**  
(Billion Dollars)

Lines of Business	2004	2005	Percent Change 2004-2005	Percent Change Excluding Mergers and Acquisitions 2004-2005
Petroleum				
U.S. Petroleum				
Production	28.9	45.4	57.2	44.8
Refining/Marketing				
Refining	8.1	14.5	79.2	11.2
Marketing	1.3	2.6	97.5	120.6
Transport	1.5	0.6	-63.8	-63.8
Total Refining/Marketing	10.9	17.6	61.4	12.5
Pipelines	2.0	1.7	-15.0	-32.2
Total U.S. Petroleum	41.8	64.8	54.8	30.9
Foreign Petroleum				
Production	29.8	50.8	70.3	22.8
Refining/Marketing <sup>a</sup>	2.9	2.9	0.4	20.7
Total Foreign Petroleum	32.7	53.7	64.0	22.7
Total Petroleum	74.6	118.5	58.9	26.9
Downstream Natural Gas	5.5	6.7	21.7	13.7
Electric Power	1.4	2.2	62.2	11.7
Other Energy <sup>b</sup>	0.8	0.6	-21.0	-21.0
Chemicals	2.5	2.3	-8.8	6.0
Other Nonenergy	-0.1	0.5	--	--
Nontraceable <sup>c</sup>	1.8	2.0	12.0	-10.8
Additions to Investment in Place <sup>d</sup>	86.5	132.9	53.6	24.7
Additions Due to Mergers and Acquisitions	9.4	36.7	291.7	
Total Additions Excluding Mergers and Acquisitions	77.2	96.2	24.7	

<sup>a</sup>International Marine is included in Refining/Marketing.

<sup>b</sup>The Other Energy line of business includes coal, nuclear, and non-conventional energy.

<sup>c</sup>Investments that cannot be directly attributed to a line of business.

<sup>d</sup>Additions to investment in place = additions to property, plant, and equipment, plus additions to investments and advances.

-- = Not meaningful.

NA = Not available.

Note: Sum of components may not equal total due to independent rounding. Percent changes were calculated from unrounded data.

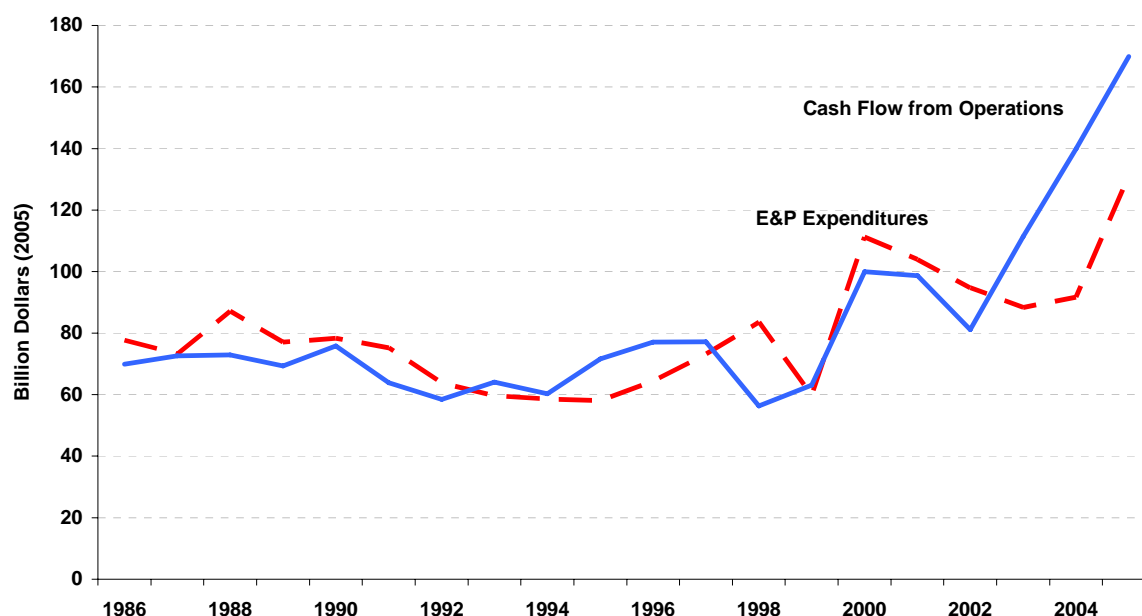
Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

predominant. Regional breakdowns are also provided.<sup>8</sup> Exploration and development expenditures provide insight into the regional targets of upstream investment by FRS companies.

<sup>8</sup> The regions for which separate FRS data are collected include U.S. onshore, U.S. offshore, Canada, Organization for Economic Co-operation and Development (OECD) Europe, former Soviet Union and Eastern Europe, Africa, Middle East, Other Eastern Hemisphere (primarily Asia Pacific), and Other Western Hemisphere (primarily South America).

Expenditures for E&P have tended to follow changes in cash flow from operations. In 2003 and 2004, however, large increases in cash flow from operations did not lead to similar increases in E&P expenditures (**Figure 7**). Many companies may have been concerned that the higher prices would not last<sup>9</sup> and continued to base investment decisions on crude oil prices that were much lower than market levels.<sup>10</sup>

**Figure 7. Cash Flow from Operations and Exploration and Production (E&P) Expenditures for FRS Companies, 1986-2005**



Note: E&P expenditures includes exploration, development, production, unproved acreage, and proved acreage expenditures.  
Source: Energy Information Administration Form EIA-28, (Financial Reporting System).

Companies also indicated that they did not maintain investments at the same rate as increases in cash flow because of limited access to the best prospects, higher tax pressure on oil companies by producing-country governments, shortage of qualified personnel, and strains on the drilling rig supply.<sup>11</sup>

Cash flow from operations continued its rapid ascent in 2005, rising \$30 billion (in constant 2005 dollars) to \$170 billion as higher oil and natural gas prices increased earnings. In contrast to 2003 and 2004, however, E&P expenditures rose by an even larger amount, \$39 billion, to \$131 billion. Expenditures for unproved and proved property accounted for 55 percent of the increase in E&P expenditures in 2005, as several large acquisitions occurred (**Table 6**). Development expenditures made up 27 percent of the annual increase in E&P expenditures, while production expenditures contributed 14 percent (see the section on production costs). Expenditures for exploration made up just 5 percent of the \$39 billion increase in total E&P expenditures.

From the 2004 level, total exploration expenditures by FRS companies across all regions increased 21 percent to \$10 billion in 2005, but remained well below the levels of the early 1980s (**Figure 8**).

<sup>9</sup> "Starting to splurge," *The Economist*, October 22, 2005, p. 68.

<sup>10</sup> "Total's Desmarest Defends Cautious Capital Spending Hurdle," *Oil Daily* (September 22, 2005), p. 5.

<sup>11</sup> "IFP notes rising outlays for services, equipment," *Oil and Gas Journal* (October 14, 2005), p. 44.

Development expenditures rose 27 percent to \$50 billion in 2005, the highest level in the history of the FRS survey.

**Table 6. Value of Mergers, Acquisitions, and Related Transactions by FRS Companies, 2005**  
(Million Dollars)

Acquiring Company	Merger or Acquisition	Reported Value of Acquisition
<b>Mergers and Acquisitions between FRS Companies</b>		
ChevronTexaco	Merger with Unocal	17,289
Valero	Merger with Premcor	6,116
Occidental	Permian Basin properties from Exxon	972
XTO	West Texas/New Mexico Properties from ExxonMobil	215
Devon	Canadian Iron River properties from ExxonMobil	200
Sunoco	Pipeline System in Texas from Exxon Mobil	100
<b>Other Acquisitions by FRS Companies</b>		
Marathon	Remaining 38% interest in MAP	4,341
Chesapeake	Acquisition of Columbia Natural Resources	2,200
ConocoPhillips	Additional interest in LUKOIL	2,160
XTO	Fort Worth Basin properties from Antero Resources Corp.	1,259
ConocoPhillips	Increased interest in Duke Energy Field Services	1,100
El Paso	Acquisition of producer Medicine Bow Energy	834
ConocoPhillips	Return to Waha concessions in Libya	732
Marathon	Interest in Waha concessions in Libya	732
Dominion	USGen fossil-fired generation facilities	642
ConocoPhillips	Interest in NMNG joint venture with LUKOIL	512
ConocoPhillips	Volume Overriding Royalty Interest with Ponca City	483
Amerada Hess	Controlling interest in Russian joint venture	400
XTO	Producing properties from Plains Exploration	336
Chesapeake	Acquisition of BRG Petroleum	325
Chesapeake	Hallwood Energy III L.P.'s interest in Texas properties	250
ConocoPhillips	Trade of coalbed methane acreage for Texas properties	250
Chesapeake	Producing assets in Texas/Permian Basin	228
Occidental	Chemical facilities from Vulcan Materials Company	214
ConocoPhillips	Equity in North Caspian PSA from British Gas Int'l	200
Chesapeake	Producing assets in Texas/Permian Basin	198
Dominion	Kewaunee nuclear power station	192
Chesapeake	Producing assets in Texas/Permian Basin	139
Occidental	Lease payments for production-sharing contract in Oman	137
Occidental	Payment for re-entry into Libya	133
Equitable	99% interest in Eastern Seven Partners, LP	105

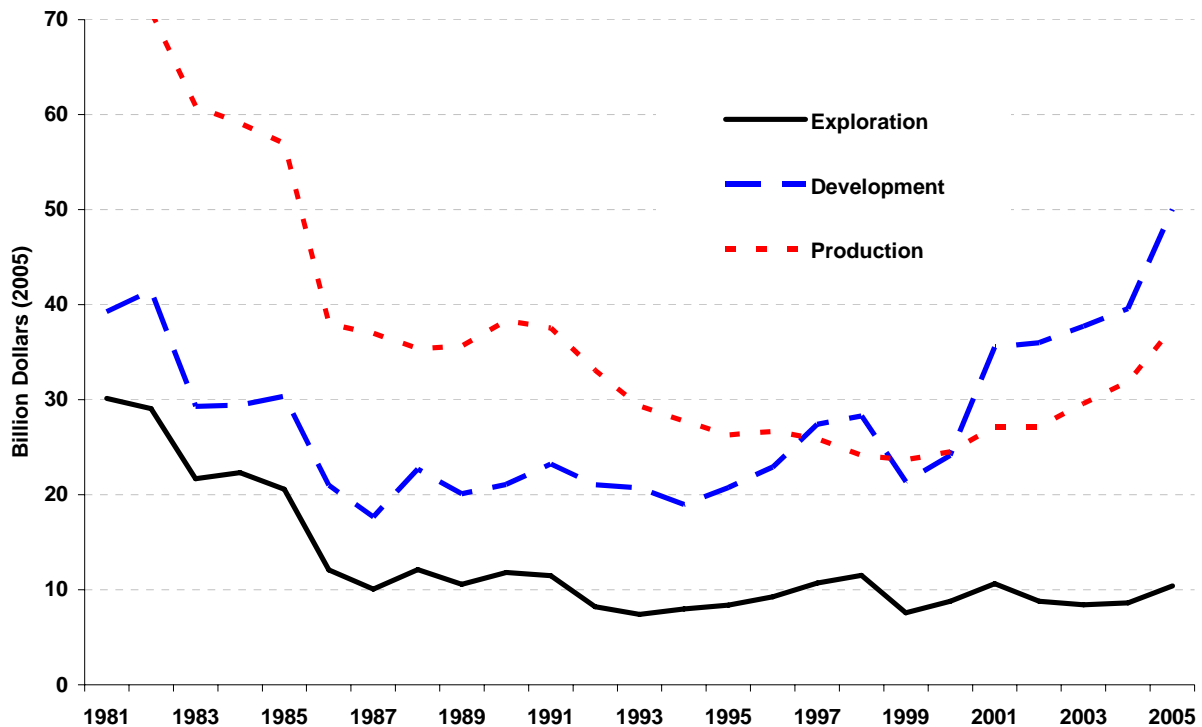
Sources: Company annual reports to shareholders and press releases.

Regionally, despite its maturity as an oil- and natural gas-producing region, the U.S. onshore continues to receive more exploration and development expenditures than any other FRS region. Exploration expenditures increased to \$2.1 billion in 2005 (**Figure 9**), the highest amount since 1991. Expenditures for development, however, predominate in the U.S. onshore region: they rose to \$18.3 billion in 2005 (**Figure 10**), which was 37 percent of FRS companies' development expenditures worldwide.

Chesapeake Energy Corporation is very active in exploration and development in the U.S. onshore region. Chesapeake is one of the largest natural gas producers in the United States, focusing on discovering,

developing, and acquiring onshore natural gas reserves. Chesapeake led the nation in drilling activity in 2005, drilling or participating in nearly 2,000 wells. In addition, Chesapeake invested \$362 million in

**Figure 8. FRS Worldwide Expenditures for Exploration, Development, and Production, 1981-2005**



Source: Energy Information Administration Form EIA-28 (Financial Reporting System).

leasehold and 3-D seismic data in 2005 to identify future drilling opportunities.<sup>12</sup> Chesapeake is looking to expand exploration prospects in the Appalachian basin with its acquisition of Columbia Natural Resources.<sup>13</sup>

Unconventional natural gas has become a very important part of U.S. onshore production. Devon Energy Corporation is one of the companies that has been involved in developing unconventional resources in the U.S. onshore region. Devon began producing natural gas from coal beds in New Mexico's San Juan Basin in the 1980s. Devon also has a coal bed methane project in the Powder River Basin in Wyoming and is piloting another project in Wyoming's Wind River Basin. Devon, the largest producer in the Barnett Shale in North Texas, added more reserves than it produced in 2005, indicating that this area will continue to be an important source of natural gas production.<sup>14</sup>

EOG Resources maintains an active exploration program in the Barnett Shale, Permian Basin, Rocky Mountain, Mid-Continent, and other areas designed to extend fields and add new prospects to its portfolio.<sup>15</sup> EOG significantly increased its exploration expenditures in 2005, due primarily to geological and geophysical expenditures in the Barnett Shale area.<sup>16</sup> Using horizontal drilling and enhanced completion technologies, EOG made several significant gas discoveries in the Barnett Shale and is

<sup>12</sup> Chesapeake Energy Corporation, 2005 U.S. Securities and Exchange Commission Form 10-K filing, p. 3.

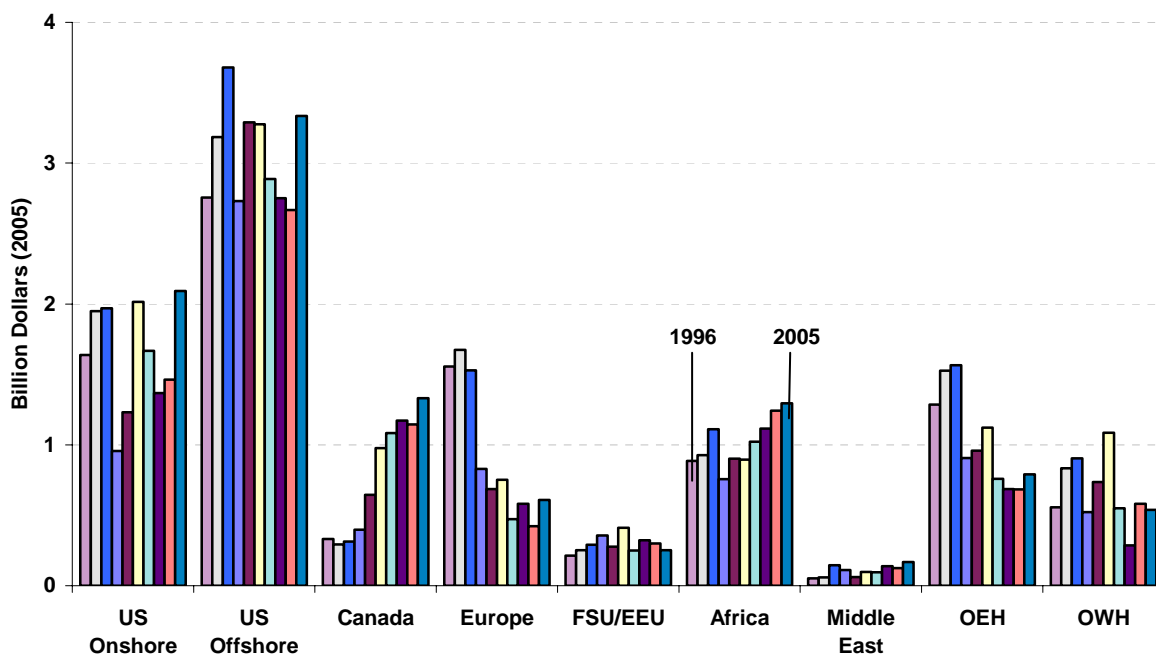
<sup>13</sup> "Chesapeake expands into 'underexplored' Appalachian basin," *Oil and Gas Journal* (October 24, 2005), p. 31.

<sup>14</sup> Devon Energy Corporation, *2005 Annual Report*, pp. 11, 20.

<sup>15</sup> EOG Resources, Inc., 2005 U.S. Securities and Exchange Commission Form 10-K filing, pp. 1-2.

<sup>16</sup> EOG Resources, Inc., *2005 Annual Report to Shareholders*, p. 14.

**Figure 9. FRS Expenditures for Oil and Natural Gas Exploration by Region, 1996-2005**



Note: FSU/EEU is former Soviet Union and Eastern Europe. OEH is Other Eastern Hemisphere, which is primarily the Asia Pacific region. OWH is Other Western Hemisphere, which is primarily Central and South America and the Caribbean.

Source: Energy Information Administration Form EIA-28 (Financial Reporting System).

positioned to continue to expand production and reserves for several years to come.<sup>17</sup> EOG is also planning to examine the potential of six more shale plays in the United States.<sup>18</sup>

After declining for the past 4 years, exploration expenditures by FRS companies in the U.S. offshore region increased 25 percent in 2005 from 2004, reaching their highest level since 1998. An increase in deepwater drilling activity is expected over the next 2 years as companies rush to drill wells before leases expire.<sup>19</sup> Expenditures for development declined in 2005 for the second year in a row after peaking in 2003, which may be due in part to project delays attributable to damage from Hurricanes Katrina and Rita.

Several FRS companies reported increased activity in the Gulf of Mexico in 2005. The deepwater Gulf of Mexico is one of Chevron's "focus areas" for exploration.<sup>20</sup> The company participated in five wells in the Gulf of Mexico deepwater exploration program, resulting in two announced discoveries and one successful appraisal well.<sup>21</sup> Chevron also established a new drilling depth record in the Gulf of Mexico—34,194 feet.<sup>22</sup> Chevron's successful production test at its Jack discovery was considered a major

<sup>17</sup> EOG Resources, Inc., *2005 Annual Report to Shareholders*, p. 3 and EOG Resources, Inc., 2005 U.S. Securities and Exchange Commission Form 10-K filing, p. 2.

<sup>18</sup> "EOG Resource Probes Six New Barnett Shale 'Clones'," *Oil Daily* (May 8, 2006), p. 5.

<sup>19</sup> "Lower Tertiary Exploration Activity to Surge," *Oil Daily* (October 16, 2006), p. 1.

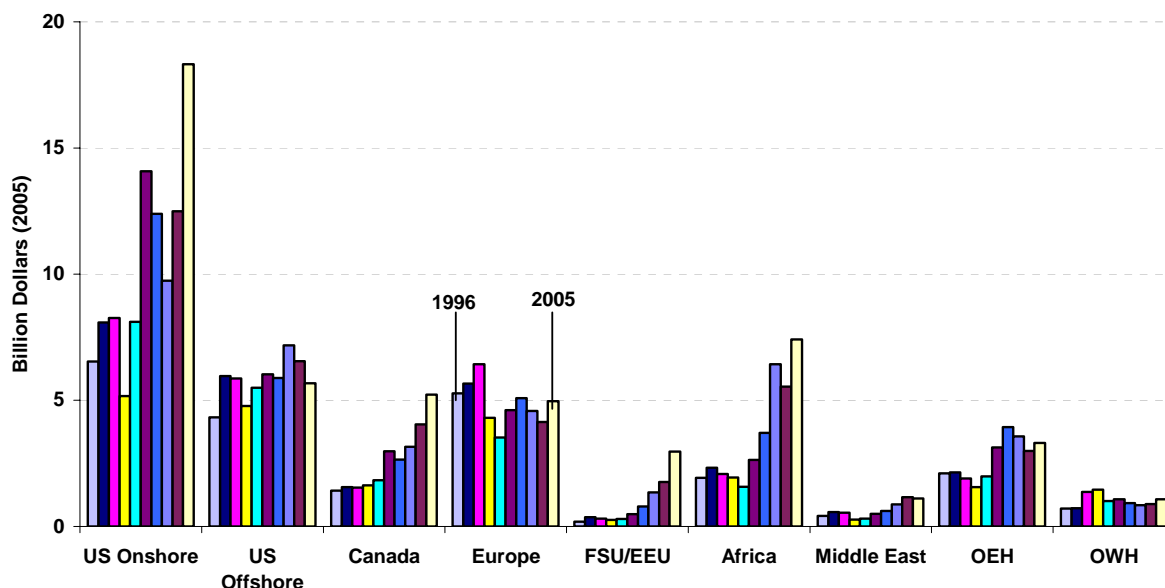
<sup>20</sup> Chevron Corporation, *2005 Supplement to the Annual Report*, p. 11.

<sup>21</sup> Chevron Corporation, 2005 U.S. Securities and Exchange Commission Form 10-K filing, p. 12.

<sup>22</sup> Chevron Corporation, *2005 Supplement to the Annual Report*, p. 12.

milestone in the emerging Lower Tertiary play, which is expected to be one of the industry's best bets for large

**Figure 10. FRS Expenditures for Oil and Natural Gas Development by Region, 1996-2005**



Note: FSU/EEU is former Soviet Union and Eastern Europe. OEH is Other Eastern Hemisphere, which is primarily the Asia Pacific region. OWH is Other Western Hemisphere, which is primarily Central and South America and the Caribbean.  
Source: Energy Information Administration Form EIA-28 (Financial Reporting System).

discoveries.<sup>23</sup> BP made a number of new discoveries in the deepwater Gulf of Mexico in 2005. It expects to add 200,000 barrels per day of deepwater Gulf of Mexico production over the next 2 years through the development of major projects including Atlantis and Thunder Horse.<sup>24</sup>

Exploration and development expenditures in foreign FRS regions increased 24 percent to \$31 billion in 2005. For the past 3 years, FRS companies have put more exploration and development expenditures into Africa than they have in any other foreign region (**Figures 9 and 10**). ExxonMobil plans to drill 30 wildcat wells between 2005 and 2007 in Angola and Congo, and plans to undertake exploration in Chad and deepwater Madagascar.<sup>25</sup> Its production base in Africa includes operations in Angola, Chad, Cameroon, Equatorial Guinea, and Nigeria. In addition, ExxonMobil is involved in LNG projects in Nigeria and Angola, and is conducting exploration activities in several other African countries.<sup>26</sup> The Kizomba B project in deepwater offshore Angola started production in 2005, ramping up to a current rate of more than 250,000 barrels per day.<sup>27</sup> Chevron embarked on a major development program in Angola in an effort to significantly increase production in 2006. Chevron has the largest acreage position in deepwater offshore Nigeria and has several projects expected to begin production over the next 5 years.<sup>28</sup>

Canada continues to receive considerable interest from FRS companies. Exploration and development expenditures have increased steadily over the past several years (**Figures 9 and 10**), reaching \$6.6 billion in 2005. The remaining resources tend to be unconventional, which are much more difficult to produce.

<sup>23</sup> "Jack Discovery Marks Milestone for US Gulf," *Oil Daily* (September 6, 2006), p. 1.

<sup>24</sup> BP plc, *Annual Report on Form 20-F 2005*, pp. 33-34.

<sup>25</sup> "Majors Turn to Africa for Growth, But Face Mounting Competition," *Oil Daily* (November 10, 2005), p. 5.

<sup>26</sup> Exxon Mobil Corporation, *2005 Financial and Operating Overview*, p. 48.

<sup>27</sup> Exxon Mobil Corporation, *2005 Financial and Operating Overview*, p. 38.

<sup>28</sup> Chevron Corporation, *2005 Supplement to the Annual Report*, pp. 18-22, 38.



Coal bed methane and tight gas sources are estimated to account for more than 25 percent of Canada's current natural gas production.<sup>29</sup> Devon is involved in developing unconventional natural gas as well as unconventional oil resources in the oil sands of western Canada. Canada is Devon's second-largest producing area after the U.S. onshore region. Devon expects to begin production at its Jackfish project in the second half of 2007. At the end of 2005, Devon was drilling the first exploratory well in the Beaufort Sea in 15 years.<sup>30</sup> Apache Corporation spent \$1.2 billion in exploration and development in Canada in 2005. The company signed a farm-in agreement with ExxonMobil in May 2005 to drill and operate 145 new wells in Alberta over a 36-month period. As part of a separate 2004 farm-in agreement with ExxonMobil, Apache had drilled 457 wells through the end of 2005.<sup>31</sup>

Exploration and development expenditures in the former Soviet Union region increased 56 percent in 2005. ExxonMobil expects its near-term growth in production capacity to be led by offshore West Africa, Russia, and the Caspian.<sup>32</sup> ExxonMobil's operations in the Russian/Caspian region accounted for about 3 percent of the company's oil and gas production in 2005, but this share is expected to increase as new projects come online. In the Caspian, ExxonMobil is involved in the development of three of the largest fields in the world: Kashagan, Tengiz, and Azeri-Chirag-Gunashli. Production from Azeri-Chirag-Gunashli in the southern Caspian Sea averaged 261,000 barrels per day (gross) in 2005.<sup>33</sup> The first phase of ExxonMobil's Sakhalin 1 project in offshore eastern Russia started production in October 2005 with the capacity to deliver 50,000 barrels per day of oil and 150 million cubic feet of natural gas to the Russian market.<sup>34</sup>

Capital expenditures by the FRS companies for refining and marketing increased 49 percent (in nominal dollars) from 2004 to \$21 billion in 2005 (**Table 5**), mostly as the result of mergers and acquisitions. Valero acquired Premcor (**Table 6**) to become the second largest U.S. refiner (and largest non-integrated refiner).<sup>35</sup> Marathon bought out Ashland's portion to acquire full ownership of Marathon Ashland Petroleum.<sup>36</sup>

Several companies reported refining/marketing capital expenditures to meet more stringent specifications for petroleum products and to enhance their capability to process heavier crude oil and produce more light products. Expenditures were also required to repair damage from hurricanes. ConocoPhillips reported that its Alliance refinery, which was shut down due to Hurricane Katrina, did not resume operations until January 2006. The Lake Charles and Sweeny refineries, which were shut down because of Hurricane Rita, did not resume full operations until October 2005. ConocoPhillips also reported construction of hydrotreating and coker units to meet clean fuel requirements for low-sulfur gasoline and ultra-low-sulfur diesel fuel.<sup>37</sup>

Higher returns encouraged companies to consider capacity additions. Marathon is conducting a front-end engineering and design (FEED) study for a proposed \$2.2 billion, 180,000 barrel-per-day capacity

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<sup>29</sup> "Experts Say North America Is Running Out of Cheap Gas," *Oil Daily* (March 14, 2006), p. 4.

<sup>30</sup> Devon Energy Corporation, *2005 Annual Report*, pp. 20-21.

<sup>31</sup> Apache Corporation, 2005 U.S. Securities and Exchange Commission Form 10-K filing, p. 23.

<sup>32</sup> Exxon Mobil Corporation, *2005 Financial and Operating Overview*, p. 27.

<sup>33</sup> Exxon Mobil Corporation, *2005 Financial and Operating Overview*, p. 54.

<sup>34</sup> Exxon Mobil Corporation, *2005 Financial and Operating Overview*, p. 38.

<sup>35</sup> "Aspects of Valero Energy Corp.'s Proposed Acquisition of Premcor Inc.," Energy Information Administration, available on the Internet at <http://www.eia.doe.gov/emeu/finance/mergers/vpindex.html> (October 17, 2006).

<sup>36</sup> "Marathon Completes Acquisition of Ashland Inc.'s Interest in Marathon Ashland Petroleum," Marathon Oil Corporation (June 30, 2005). Available on the Internet at <http://www.eia.doe.gov/emeu/finance/mergers/vpindex.html> (November 28, 2006).

<sup>37</sup> ConocoPhillips Company, 2005 U.S. Securities and Exchange Commission Form 10-K filing, pp. 24-26.

expansion at its Garyville, Louisiana, refinery.<sup>38</sup> Motiva announced that expansion projects under consideration range from 100,000 barrels per day to 325,000 barrels per day.<sup>39</sup>

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<sup>38</sup> Marathon Oil Corporation, *2005 Annual Report*, p. 2.

<sup>39</sup> Royal Dutch Shell, *2005 Operating and Financial Review*, p. 45.

